

ARGUMENTS/REMARKS:

Interview Summary

On or about March 6, 2006 the undersigned initiated a telephone call with Examiner Hoang to inquire whether the Proposed Amendment that was faxed to the Office on December 16, 2005 would place the claims in condition for allowance. Examiner Hoang said proposed claim 4 and the claims dependent from proposed claim 4 would be allowable, but that he would maintain his prior art rejection of the remaining claims.

Elections/Restrictions

Non-elected claims 70-72 have been cancelled herein as required.

Claim Cancellations

The claims for which the Examiner said he would maintain the prior art rejection have been cancelled, except for claims 2, 11, 12, 19 and 20, which have been amended to depend from claim 4, claim 13 which depends from amended claim 12, and claim 14 which depends from claim 13. This cancellation of claims is without prejudice, and is made to expedite the issuance of a patent on the claims currently found allowable. Applicant does not concede any unpatentability for the claims cancelled herein, and reserves the right to file a continuation application directed to them.

Drawings

The drawings were objected to on grounds that neither the sensor and signal source recited in claims 1, 4, 24 and 40, nor the additional substrate with W layer recited in claims 19-20, 35-36 and 51-52, were shown.

The objection with respect to claim 4 is believed to be resolved by the present amendment to that claim (claims 1, 24 and 40 have been cancelled). This amendment requires that the signal source be connected to apply a current or a voltage actuating signal, and that the sensor be connected to sense the voltage across the W layer in the case of a current actuating signal, or the current through the W layer in the case of a voltage actuating signal. The sensor and signal source as presently described in the claim are clearly shown as voltage source 50 and current meter 52 in FIG. 14, and current source 54 together with voltage meter 56 in FIG. 15. These elements are discussed in the specification on page 23, lines 21-24 and page 24, lines 23-28.

With respect to claims 19-20, (claims 35-36 and 51-52 have been cancelled), the additional substrate with W layer is shown in FIG. 20 as the lower sensor 76, which is additional to the upper sensor 74. Both sensors are described at page 26, lines 27-30 as being "of the type described herein". Single sensors of the same type are shown in FIGs. 14 and 15, and are described in the specification at page 23, lines 21-23 as consisting of "a

tungsten conductive film 2 that is deposited on an AlN substrate 4". Accordingly, the drawings when read in light of the specification show the additional substrate with W layer.

Claim Amendments

Claims 4, 7-8 and 10 were found to be allowable if rewritten or amended to overcome the rejections(s) under 35 U.S.C. 112 1st and 2nd paragraph. Independent claim 4 has been rewritten accordingly, as described below. Claims 7-8 and 10 depend from claim 4 and incorporate the present amendment to claim 4, while amendments have been made to make claims 2, 11-14, 19 and 20 also depend (directly or indirectly) from claim 4.

Claim 5 was not included with claims 4, 7-8 and 10 as being allowable if rewritten, but since there was no prior art rejection of claim 5 it is assumed that it was inadvertently omitted from the claims found to be allowable if rewritten. Claim 5 required that an oxidant resistant protective layer on the W layer comprise B₂O₃-SiO₂. To simplify the amendments, B₂O₃-SiO₂ has been added to the materials that may be used for the protective layer in claim 4, and claim 5 has been cancelled.

Claim Rejections - 35 U.S.C. §112

Claims 1-5, 7-8, 10-14, 19-20, 24-30, 35-36, 40-46 and 51-52 were rejected under 35 U.S.C. 112, first paragraph, for lack of enablement for the use of a separate sensor to

sense the response of the W layer or conductive layer. It is believed that the preambles of independent claims 1, 24 and 40, which recited a heater system "capable of self-sensing its own temperature", may have led to confusion; these claims have been cancelled. With respect to claim 4 which remains in the application, and the claims presently dependent from claim 4, the separate sensor is identified in FIG. 14 as ammeter 52, and alternately in FIG. 15 as voltmeter 56. Ammeter 52 senses the current through the W layer 2 in FIG. 14, while voltmeter 56 senses the voltage across tungsten layer 2 in FIG. 15. Since the amended claims no longer refer to the "response of said W layer", but rather to the "voltage across said W layer in the case of a current actuating signal, or the current through said W layer in the case of a voltage actuating signal", there is enablement for the claims as presently amended.

The same claims were rejected under 35 U.S.C. 112, second paragraph. Of these, claim 4 is the only independent claim that has not been cancelled.

In claim 4, insufficient antecedent basis was found for "the response". This term has been amended to "the voltage across said W layer in the case of a current actuating signal, or the current through said W layer in the case of a voltage actuating signal". The new phrasing is not believed to have any element of indefiniteness. The portions of the specification and drawings which support the new wording are identified two paragraphs up.

In claim 19, insufficient antecedent basis was found for "said...conductive layer" recited at lines 9-10. The term "conductive layer" has been amended to "W layer", which has clear antecedent basis in parent claim 4. The terms "additional substrate" and "additional W layer" in the second paragraph of claim 19 have antecedent basis in the first paragraph of claim 19.

Since all of the claims remaining in the application should now be in proper form for allowance, a Notice of Allowance is respectfully requested.

Respectfully submitted,

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